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ORNAMENTAL HEDGES for the Southern Great Plains



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Hedges have an important place in the farm- and ranch-home beautification program in the southern Great Plains. They can be used for border and background plantings, screening, low windbreaks, and as living fences.

Experiments conducted since 1931 at the Southern Great Plains Field Station, Woodward, Okla., and in cooperative experimental plantings in the southern Great Plains area proved that hedges can be satisfactorily developed for almost any desired purpose. The rather severe climatic conditions of the southern Great Plains limit the species that can be used. This publication gives instructions for selecting planting stock and the planting, care, and pruning of hedges. Forty-seven different kinds of plants are evaluated.

ORNAMENTAL HEDGES FOR THE SOUTHERN GREAT PLAINS

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Hedges have an important place in the farm- and ranch-home beautification program in the southern Great Plains.¹ They are useful in defining borders and as background plantings in small areas where it is not practical to use shrubbery. Formally sheared or untrimmed hedges can be used to screen unsightly objects or areas. Hedges can serve as low windbreaks and as living fences on farms and ranches. Low-growing hedges make neat borders for flower gardens or an excellent foreground planting for taller growing shrubs or coniferous trees.

Ornamental and protective hedges have been used at the Southern Great Plains Field Station, Woodward, Okla., since its establishment in 1914. More intensive studies of plants for hedges began in 1931, with the start of a research program that included the introduction and testing of all woody plant materials that might be useful in the southern Great Plains area (fig. 1). The program permitted the propagation and limited distribution of plant materials to selected cooperators in the area. This bulletin summarizes the information obtained from station and cooperative plantings and from observations made of other plantings throughout the southern Great Plains area.

Among the climatic conditions that affect the establishment and growth of hedges in the southern Great Plains are: The limited precipitation in most of the area, the wide range and quick changes in temperatures, the occurrence of hail and sleet storms, the prevalence of drying winds, and the tendency of the soils to be alkaline. The average annual precipitation in this area ranges from 30 inches along the eastern boundary to about 12 inches in parts of the western section.

¹ In accordance with local usage and to avoid monotony, Plains and southern Plains when used in this bulletin take the place of southern Great Plains to designate the area shown in figure 1.

plants. One-year-old seedlings of Chinese elm, thornless honeylocust, mulberry, or Osage-orange are satisfactory. Lilac, privet, and honeysuckle should be 2 years old. Four- to six-year-old balled and burlapped transplants of Rocky Mountain juniper and Eastern redcedar are desirable. Chinese arborvitae will transplant bare-rooted readily when 2 to 4 years old.

PLANTING

In the southern half of the southern Great Plains planting can usually be done during the entire winter and spring. Very often, in open winters, planting is possible any time during the dormant season as far north as Woodward, Okla. North of Woodward planting should be delayed until spring.

Plantings should be made as soon as possible after the plants have been dug from the nursery row. When nursery stock is shipped in and arrives at a time when planting is not practicable, it is best to heel in the plants or keep them in a moistened condition in a cool basement.

Hedges that are close-planted for shearing should be planted by the trench method. The trench should be sufficiently wide and deep to accommodate the root system without crowding. Plants should be set 1 to 2 inches deeper than they were in the nursery row. After soil has been filled in around and over the roots, the entire trench should be flooded with water to settle the earth. When the water soaks in, minor realignments of the plants can be made and additional soil can be added if necessary. The hedgerow level should be slightly lower than the surrounding soil, in order to leave a watering basin.

Privets and other hedge plants, except as noted below, may be planted before pruning. When the planting is finished, cut the plants back to within a few inches of the ground level. This cutting back is essential if a dense, many-stemmed hedge is to be developed. When nursery stock for hedge planting is obtained with tops partly cut back, do not leave these stubs 5 to 12 inches high but cut back to within a few inches of the ground level after planting. The only hedge plants that should not be pruned to the ground are the conifers, broadleaved evergreens, and deciduous specimens that have been balled and burlapped. Only sufficient shearing to balance and to even up the individual plants is required for these plants.

The spacing of plants in the hedgerow depends upon the species and the type of hedge to be developed. Very dwarf plants used in edgings should be set about 6 inches apart. For medium-height hedges the plants should be spaced about 12 inches apart. Trees and large shrubs for high, clipped hedges should generally be spaced 18 to 30 inches apart. Shrubs for untrimmed hedges should be spaced two or three times as far apart as those of the same species for trimmed hedges.

CARE AND PRUNING OF THE HEDGE

Commercial or barnyard fertilizers may be added. Apply the fertilizer to the topsoil after planting and not to the soil that is being used in filling the trench. In the southern Great Plains an application of barnyard manures to most soils tends to increase the amount of chlorosis, or yellowing, of the leaves. If the humus of the soil is to be

increased by adding this type of fertilizer, then an additional fertilizer in the form of ammonium sulfate or ammonium nitrate should be used.

When such plants as the Vanhoutte spirea are severely affected by chlorosis, the condition can be remedied by the use of ferrous sulfate. Local county or home demonstration agents are usually familiar with such treatments and will recommend rates of application for local conditions.

Competition for survival among plants in a hedge is great. Therefore, watering the hedges frequently is essential. Aggressive species that reach out over a large soil area should be watered very thoroughly at infrequent intervals, and species with bushy, compact root systems should be watered often.

The method of shearing newly planted hedges is governed by the habit of growth of the species. Throughout most of the southern Great Plains, rapidly growing plants such as bladder-senna, fontanesia, and chaste-tree will grow 12 inches or more in the early part of the season. When this height is reached, the tops should be cut back to about 6 inches. As each successive spurt of growth is made, the plants should be sheared to within 3 or 4 inches of the preceding shearing. With rampant-growing shrubs shearing may be repeated several times the first year. In the following years the plants should be sheared to within 2 or 3 inches of the preceding shearing until the desired height and width are reached. Later shearings should be within an inch or fraction of an inch of the previous cut. In the southern Great Plains it has been possible to maintain hedges of such species as Chinese, or Siberian, elm at the desired dimensions for 15 years.

The slower growing shrubs, including lilacs and honeysuckle, should never be repeatedly sheared back. A complete renovation is eventually required after the width and height of the hedge have exceeded the desired dimensions. Plants may be cut back to the ground level, and the process of developing a hedge repeated.

FORMS OF TRIMMED HEDGES

Trimmed hedges are usually maintained in a simple rectangular form. Many such hedges in the southern Great Plains are very satisfactory. However, close examination will show that there has been difficulty in keeping a dense growth on the sides, particularly near the base. This is especially true on the north side of hedges planted in east and west directions. This condition can be corrected by tapering the sides of the hedge to permit even distribution of light.

The best hedge forms are triangular or rounded. More skill is needed in developing a rounded hedge than a triangular or rectangular form. Successive pruning to any of these forms is relatively easy after the hedge has been carefully shaped to the dimensions wanted.

RENOVATING HEDGES

Overgrown, neglected, or spindly hedges should be renovated as quickly as possible. A poor hedge is much worse than no hedge at

all. Poorly maintained plantings tend to discourage future plantings of the species used.

Species that make a relatively good recovery after being cut back to the ground level include the bladder-senna, crapemyrtle, desert-willow, euonymus, trifoliolate-orange, privet, lilac, tamarix, chaste-tree, honeysuckle, and Chinese, or Siberian, elm. Some species spend themselves and cannot be renovated. Coniferous species of hedge plants that do not sprout from the root crown when cut back include Rocky Mountain juniper and Eastern redcedar.

SELECTING SPECIES FOR VARIOUS KINDS OF HEDGES

Careful consideration should be given to the type of plant when making a selection for a hedge. Species used to develop tall-growing informal hedges include bladder-senna, European euonymus, Fortune fontanesia, New Mexican forestiera, Amur honeysuckle, Chinese lilac, trifoliolate-orange, shrub-althea, and chaste-tree. Privets, winter honeysuckle, and spirea are used for informal hedges of medium height. The list of shrubs for low-growing informal hedges is limited to coralberry, rose daphne, and Lodense privet. By using vines as trailing shrubs, the list of low-growing hedges can be extended to include China fleecyvine and Japanese honeysuckle.

For tall—more than 5 feet—trimmed hedges, the list includes the oriental arborvitae, redcedars, Chinese, or Siberian, elm, euonymus, fontanesia, winter honeysuckle, Chinese lilac, trifoliolate-orange, and smoketree. Species that can be used for a trimmed hedge of 2 to 5 feet for a relatively long period are redcedars, Peking cotoneaster, elm, euonymus, fontanesia, New Mexican forestiera, Amur and winter honeysuckles, lilac, trifoliolate-orange, privet, spirea, tamarix, and chaste-tree. Hedges to be kept sheared to less than 2 feet in height could be made of fontanesia and several of the privets.

Hedges that will grow in partial shade are coralberry, Peking cotoneaster, euonymus, honeysuckle, privet, and spirea. Plants such as anisacanth, bladder-senna, crapemyrtle, desertwillow, tamarix, and chaste-tree should be planted in full sunlight.

DISCUSSION OF SPECIES FOR HEDGES ²

The discussion on the hedge species listed in this publication includes their use, a brief summary of their behavior as hedges in the southern Great Plains, special treatment required for different species, and methods of propagating them. Statements concerning the behavior of species are based on a study of hedges at the Southern Great Plains Field Station, Woodward, Okla., and on observations of cooperative and other plantings throughout the southern Plains. Many of the species are relatively new to parts of the area and have not been subjected to some of the extremes of weather. The statements on the species here listed apply only to those grown in the southern Great Plains area, as indicated in figure 1.

² See Farmers' Bulletin 2025, Ornamental Shrubs for the Southern Great Plains, for detailed information on shrubs.

GLOSSY ABELIA³

(*Abelia grandiflora* (André) Rehd.)

Glossy abelia has long been a favorite shrub for informal hedge planting in the southern one-third of the southern Great Plains and along the eastern border of the area as far north as Enid, Okla. North and west of this area, it cannot be safely used in hedges. At Woodward, Okla., it has repeatedly been killed out in nursery-row plantings. On adapted sites it forms an attractive hedge about 6 feet in height. The white to pink flowers bloom from midsummer until late fall. On most sites in the southern third of the Plains it retains its foliage throughout most of the winter. Glossy abelia can be propagated by greenwood cuttings under glass.

WRIGHT ANISACANTH

(*Anisacanthus wrightii* (Torr.) Gray)

Wright anisacanth, a native of central and lower Texas, makes an attractive informal hedge. The species tolerates heat and will make a summer show of orange-red tubular flowers. In the Dalhart, Tex., and Woodward, Okla., districts it reaches about 3 feet in height, and at Big Spring, Tex., it reaches a height of 4 feet. Wright anisacanth requires early-spring pruning to remove the small, twiggy terminal wood killed by early freezes the preceding fall. It can be rejuvenated by cutting it back to the ground every 3 or 4 years. The species prefers full light for best development. Propagation is by cuttings.

SIBERIAN PEA-TREE

(*Caragana arborescens* Lam.)

In the southern Great Plains, Siberian pea-tree should be confined to western Kansas, eastern Colorado, and the higher elevations of New Mexico. There it can be used as a low clipped hedge or as a tall informal hedge. However, it becomes leggy when used as an informal hedge. The appearance of such a hedge can be improved by planting low-growing flowers or shrubs in front of the hedge. Sheared hedges should be kept low and sheared in a triangular or rounded fashion. Propagation is relatively easy by seed.

DESERTWILLOW

(*Chilopsis linearis* (Cav.) Sweet)

Desertwillow, or flowering willow, is a native from southwestern Texas, westward to southern California, and southward into Mexico. It does not make an attractive sheared hedge. Desertwillow makes an excellent informal border hedge when cut back to the ground each winter. The large trumpet-shaped blooms are borne on the current season's wood, and cutting back stimulates bloom. In the northern part of the southern Great Plains the plant annually reaches 3 to 5 feet, depending upon site and available moisture. A height of 6 to 8 feet is often attained in the southern part of the area. The best

³ Hedge species arranged alphabetically for Latin names.

selection of the desertwillow has a relatively short, broad, dark-green leaf and a dark rose-lavender bloom. This species is not tolerant to shade. Propagation of select plants is by cuttings made and planted in early spring. Seedlings are easily produced by late-spring planting of seed.

COMMON BLADDER-SENNA

(*Colutea arborescens* L.)

Common bladder-senna is difficult to handle as a sheared hedge unless kept to a height of about 1½ feet. When sheared taller than this, it quickly becomes leggy at the base. The species makes a rapid growth and can be used as an informal hedge on sites where the open base is not objectionable. The foliage is light green. When the plant is sheared, it will have only a few scattered, yellow, pealike blooms in the summer. The fruit is produced in inflated bladderlike seed pods. This plant is relatively short-lived in the southern Great Plains; hence, it should be used only as a temporary hedge. The species does best in the southern two-thirds of the area. Propagation is by planting soaked or treated seed.

COMMON SMOKETREE

(*Cotinus coggygia* Scop.)

Common smoketree has rather coarse branches and large leaves and does not make so attractive a sheared hedge as the finer stemmed species of shrubs. It can be kept to a 4-foot height for a number of years, but the best use of the smoketree is as a large, informal border hedge. If the rampant-growing branches are occasionally tipped back, the species will make a showy hedge 12 to 15 feet in height. The hedge bears a profusion of large feathery fruiting panicles that give it a distinctive smoky appearance. It can be used on the entire southern Great Plains as a hedge if it can be irrigated. The species can be used in full light or partial shade. Propagation is by seed.

PEKING COTONEASTER

(*Cotoneaster acutifolia* Turcz.)

Peking cotoneaster did not survive the drought years of the 1930's at Woodward, Okla., and farther west. Since 1940 it has been making an excellent growth even on dry-land sites at the Woodward station. The species can be developed into an excellent low hedge. The dark-green glossy leaves and black fruits of the cotoneaster make it a handsome sheared hedge. On protected sites where it can be freely watered, the species makes a rapid growth and can be used as an informal hedge 6 to 8 feet in height. Cotoneaster is tolerant to considerable shade. Propagation is by greenwood cuttings under glass or by stratified seed.

ROSE DAPHNE

(*Daphne cneorum* L.)

Rose daphne is a delicate plant that can be used as a low border hedge in flower gardens. It needs protection from wind and requires considerable moisture for best development. It grows to a height of

a foot or more at Woodward. Plants 8 to 10 years old will have a spread of 2 feet or more, but they can be kept to a narrow band by shearing. Rose daphne is very sensitive to transplanting and must be handled with a ball of earth. The expense of establishing the species has limited the use of daphne in the area. The spicy fragrance of the delicate pink flowers justifies its use on protected sites in the southern half of the area.

WINTERBERRY EUONYMUS

(*Euonymus bungeanus* Maxim.)

Winterberry euonymus (fig. 2) has been tried as a sheared hedge at the Woodward, Okla., station. In four growing seasons it has developed into a compact hedge 2½ feet in height. Winterberry euonymus differs from other euonymus in that it has very light green foliage. The leaves tend to droop, giving the plant a limpid appearance. The species is very drought-resistant and thrives in a wide variety of soils. It has been distributed as specimen and border plants in more than 80 counties in the area. When grown as an informal hedge it should be given plenty of room. The plants often reach 10 to 12 feet in height. Winterberry euonymus is the hardiest and most rapid growing of all of the euonymus tested in the southern Great Plains. Propagation is by seed planted in the fall or by stratified seed planted in the spring.

EUROPEAN EUONYMUS

(*Euonymus europaeus* L.)

European euonymus is an Old World species that has been used as an excellent dark-green hedge at the Woodward, Okla., station. Two-year-old plants set as a hedge will make a compact growth of about 1½ feet in a few years, and the hedge can be kept to a height of 3 feet for many years. When handled as an informal hedge, it grows 8 to 12 feet high and produces an abundance of showy fruits that persist until midwinter or until the winter birds harvest the seed. It is tolerant to shade. Propagation is the same as for winterberry euonymus.

FORTUNE FONTANESIA

(*Fontanesia fortunei* Carr.)

Fortune fontanesia (fig. 3) is one of the best sheared hedges in the testing block at the Southern Great Plains Field Station. This native of China is a rampant-growing shrub that develops a series of small branches, making it ideal for hedge use. The dark-green foliage is well distributed along the small branches. Two-year-old shrubs planted a foot apart develop into a good clipped hedge 2 feet in height in 2 growing seasons. The hedge can be kept to a 2½- or 3-foot height for a number of years. When used as an informal background hedge or screen planting, the plants should be spaced 5 to 6 feet apart. This type of planting will develop a solid background 10 to 15 feet in height. During the 17 growing seasons it has been under observation at Woodward, it has not shown any insect injury or disease. Propagation is by cuttings under glass.

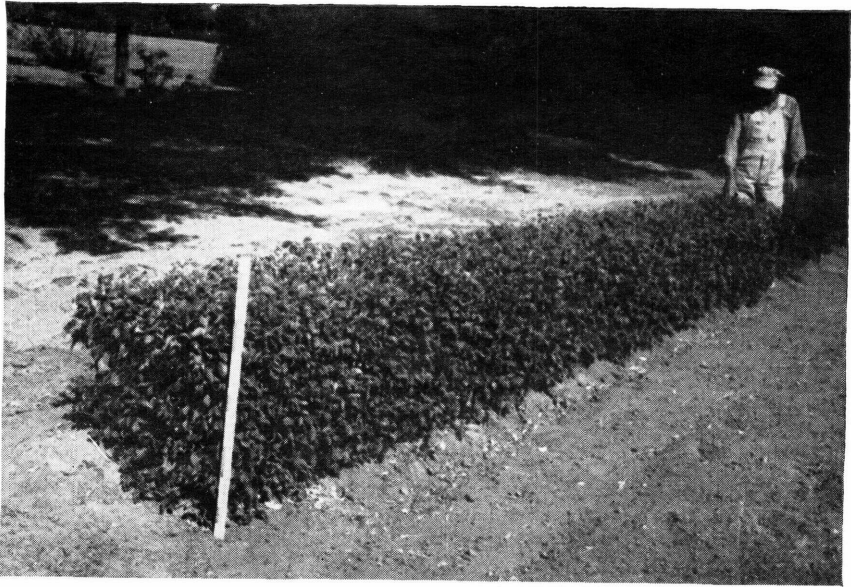


Figure 2.—*Winterberry euonymus*.

NEW MEXICAN FORESTIERA

(*Forestiera neomexicana* Gray)

New Mexican forestiera, also called adelia, tanglebush, New Mexico wild olive, paloblanco, and false privet, is native to the Southwest from western Texas westward. The common name of tanglebush is descriptive of the species, as the plant has numerous interlacing branches. This character makes it valuable as a sheared hedge. Forestiera is not selective as to site, and tests in 72 counties in the area have shown that it is one of the hardiest of the deciduous shrub species. In the western half of the area it is especially useful on sites having limited supplemental irrigation. In the eastern part of the area the species has been subject to leaf rust. Propagation is by seed, cuttings, or division.

THORNLESS HONEYLOCUST

(*Gleditsia triacanthos* var. *inermis* Pursh.)

The thornless honeylocust can be used as a sheared hedge in all of the southern Great Plains. It does not have the compactness of many other hedge species, and it should be pruned in a broad-triangular form. When sheared as a rectangle, it becomes open near the base. The thornless honeylocust ranks next to the Chinese, or Siberian, elm in the list of hardy deciduous tree species for the southern Plains. For sheared hedges it should be planted about a foot apart in a single row. When spaced 4 or 5 feet apart and allowed to grow naturally, it will make an excellent windbreak to a height of 20 feet. In this kind of planting, the plants can be allowed to grow the first season, then cut back to almost the ground level the following winter. The

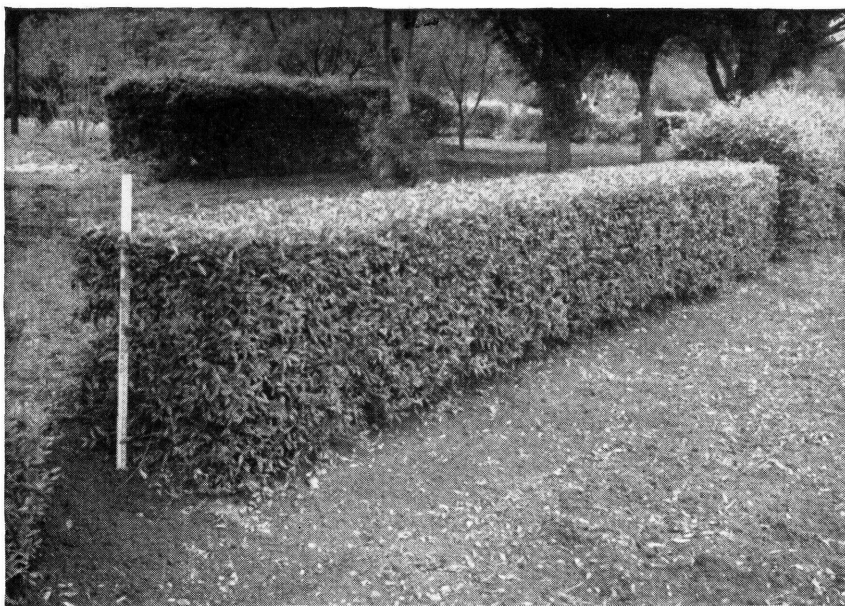


Figure 3.—*Fortune fontanesia*.

cutting back will result in the development of a series of stems rather than one main stem. Propagation is by seed from select thornless trees.

SHRUB-ALTHEA

(*Hibiscus syriacus* L.)

The single-flowering forms of shrub-althea, or rose-of-Sharon, have proved to be the more valuable in the southern Great Plains. The double-flowering forms have not been dependable. Sheared hedges, 3 or 4 feet in height, can be maintained for many years. Shrub-althea prefers the heavier soil types in the area. When grown as an informal hedge it reaches 10 to 12 feet in height and brightens the landscape in middle and late summer with large, showy blooms. Informal hedges eventually become leggy and therefore should be bordered by low-growing plants. Propagation of select forms is by cuttings under glass. Seedlings can be produced by planting seed in early spring.

WINTER JASMINE

(*Jasminum nudiflorum* Lindl.)

The winter jasmine makes a low, informal, spreading hedge that can be used in bordering mass plantings. When used as a foreground plant with evergreen trees, the bright-yellow flowers along the pendulant branches are very showy. Bloom at Woodward is usually in February. The species layers very easily and should be pruned occasionally to prevent spreading. It does not respond to shearing. It is most useful in the eastern third of the southern Plains. In the rest of the area it cannot be depended upon for bloom. Propagation is by layering.

PFITZER JUNIPER

(*Juniperus chinensis* forma *pfitzeriana* (Spaeth) Rehd.)

Pfitzer juniper is the most aggressive of all the low-growing conifers tested in the southern Great Plains. Its best use is as an informal hedge. Pfitzer juniper grows about 6 feet high and has an irregular spread of 12 feet or more when planted in the eastern two-thirds of the area. In Quay County, N. Mex., it has not grown so tall, but it makes a wide-spreading growth. It makes an excellent border-row species for windbreaks, as well as a border for driveways, a background for flowers, or for hedges. It can be sheared as a formal hedge or in irregular fashion. A patented selection with silvery-green foliage is available. Propagation is by cuttings.

ROCKY MOUNTAIN JUNIPER

(*Juniperus scopulorum* Sarg.)

Rocky Mountain juniper, also called Colorado juniper and Rocky Mountain redcedar, ranks high among coniferous species that are useful for hedges. When used either as a sheared or an informal hedge the handsome silvery-green foliage of the Rocky Mountain juniper blends easily into the landscape. It can be used over the entire southern Great Plains area, but it does best at elevations of more than 3,500 feet, where it is superior to Eastern redcedar. Like other conifers in the southern Great Plains, it should be handled balled and burlapped or in pots or cans if a complete stand is expected. Red spider injury can be controlled by prompt and regular spraying or dusting. Propagation of select plants is by grafting. Seedlings can be produced by fall seeding or by spring seeding of stratified seed.

EASTERN REDCEDAR

(*Juniperus virginiana* L.)

Eastern redcedar has long been used as a sheared hedge in the southern Plains. The species can be kept to any practical height and width for several decades if properly maintained. Redcedar can be grown on nearly all types of soils in the area, but it does better on the heavier soils than on the very fine sandy soils. Considerable injury can be caused by the red spider to plantings along the eastern border of the area, but the insect can be controlled by regular spraying or dusting. Eastern redcedar hedges can be established by using small transplants, spaced 1 to 2 feet, depending upon how soon a dense hedge is desired. To obtain a full stand, small balled and burlapped plants should be used. The expense of handling balled and burlapped plants might seem excessive at planting time, but general use of this species for both trimmed and untrimmed hedges is recommended. Propagation is by seeding stratified seed in the spring or by seed planted in the fall.

COMMON CRAPEMYRTLE

(*Lagerstroemia indica* L.)

Common crapemyrtle (fig. 4) is the showiest of the informal flowering hedges that have been tested at Woodward. Blooming from July



Figure 4.—Crapemyrtle.

through the summer, the various selections of white, pink, lavender, and watermelon red add color to the summer landscape. An attractive hedge can be developed by using alternate plants of pink-, lavender-, and red-flowered plants. These three varieties make about the same rate-of-height growth. Crapemyrtle blooms freely during the heat of the summer if watered sufficiently. The species usually suffers some winter injury in the Woodward district; so the general practice has been to cut all plants back to the ground every winter. Figure 4 shows the average annual height growth of a hedge that has been cut back each winter. The species is recommended for that part of the area south and southwest of Woodward. Propagation is by cuttings.

PRIVETS

(*Ligustrum* spp.)

Privets have been used as hedges for generations and continue to hold their prominence. Nearly all privets are moisture-loving plants and should be confined to sites having abundant moisture. Privets develop bushy, compact root systems that cannot compete with more vigorous tree and shrub species or with aggressive grasses such as Bermuda grass. They are tolerant to considerable shade. All privets adapted to the southern Great Plains can be kept to a very low height and width for many years. Propagation of all privets is by cuttings. The hardier species can be propagated by hardwood cuttings in the nursery row, while the more tender species are propagated by cuttings under glass.

Amur privet (*Ligustrum amurense* Carr.) is commonly called Amur River North privet. Being able to withstand relatively low temperatures, it has been found most useful in the northern one-third and in the higher elevations of the southern Great Plains.

Japanese privet (*L. japonicum* Thunb.) is very sensitive to low temperatures; it should be confined to the southern one-third of the Plains. This is a broadleaved evergreen privet that makes a very attractive plant when sheared or used as natural hedge.

Glossy privet (*L. lucidum* Ait.) is another broadleaved evergreen that makes an excellent hedge in the southern counties of the area.

California privet (*L. ovalifolium* Hassk.) has been given repeated tests at Woodward, Okla., and has proved to be very tender. In the southern counties of the area its use is limited.

Quihou privet (*L. quihoui* Carr.) (fig. 5) has been the most drought-resistant of all of the privets so far tested at Woodward. It has survived and thrived when given clean cultivation under an average annual precipitation of 15 inches at Tucumcari, N. Mex. It produces creamy-white blooms if allowed to grow as an informal hedge. The weeping, or pendulant, form of Quihou privet is a very stiff-branched shrub and can be sheared into a hedge so strong that it actually can be walked on. Quihou privet and the pendulant form can be used in the entire area except the higher elevations in New Mexico and Colorado.

Chinese privet (*L. sinense* Lour.) differs from the other privets in that the leaves are smaller and lighter green. It kills back occasionally at Woodward and should be used only in the southern half of the area.

Common European privet (*L. vulgare* L.) has been tested in 78 counties in the area and has been successful on all sites having sufficient water. There are several varieties of the European privet that do equally as well as the common species. Lodense variety (*L. vulgare*

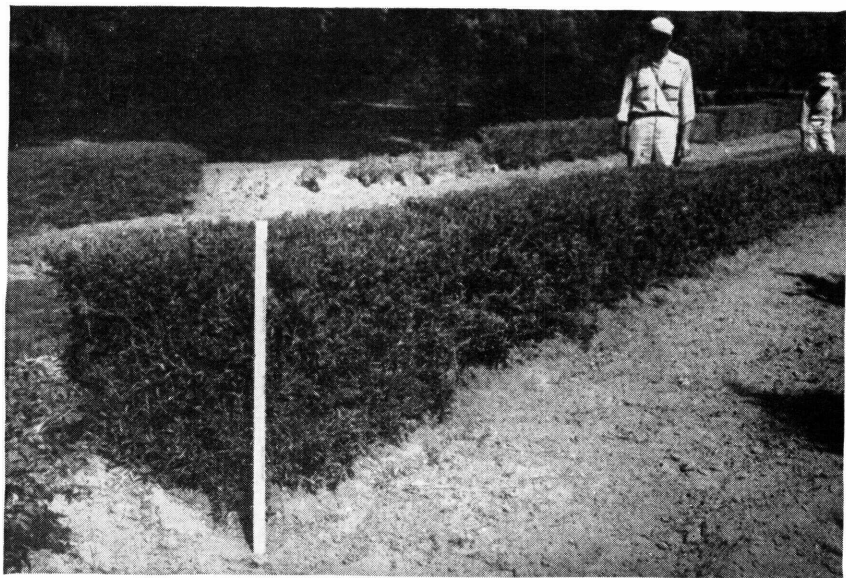


Figure 5.—Quihou privet.

forma *nanum* (Kohankie) Rehd.) is a dwarf form of the common European privet that can be used as a small border hedge for outlining flower beds. It requires very little pruning to develop a trimmed hedge and also makes an attractive informal hedge. Plants 10 to 12 years old are only 24 to 28 inches in height when allowed to grow naturally.

WINTER HONEYSUCKLE

(*Lonicera fragrantissima* Lindl. & Paxt.)

Winter honeysuckle (fig. 6) can be used as a sheared or as an informal hedge in all the southern Great Plains. The terminal growth consists of a series of small, rather stiff branches that respond readily to trimming. It grows slowly when young, so it requires more time to develop as a hedge than such species as *fontanesia*, common European privet, or *Vanhoutte spirea*. The species is almost evergreen in the southern third of the area. When used as an informal background hedge, it will grow 8 to 10 feet in height and bloom profusely in early spring. The small creamy-white blossoms are not showy, but they have the characteristic honeysuckle fragrance. Winter honeysuckle is a favorite nesting place for birds, owing to the dense protection offered by the species. Propagation is by hardwood cuttings or by layering.

AMUR HONEYSUCKLE

(*Lonicera maackii* Maxim)

Amur honeysuckle makes the most rapid juvenile growth of any of the honeysuckles that have been tested. It responds readily to shearing. The species is more drought-resistant than winter honeysuckle. Amur honeysuckle makes an excellent background hedge when allowed to grow naturally. The rather coarse, large white flowers are produced in May and are followed by red fruits that persist into midwinter. Because of the hardiness and heavy fruiting of the species it is suggested for experimental use as a cover plant for quail. Propagation is by seed or cuttings.

OSAGE-ORANGE

(*Maclura pomifera* (Raf.) Schneid.)

Osage-orange was used extensively in the early settlement days in the Plains area. Thousands of fields were bordered with bois d'arc or hedge-apple, two common names given the species, but, with the advent of mechanized farming and labor shortage, Osage-orange rapidly disappeared from the landscape. In the southern Great Plains area it can be used as a sheared or an informal barrier hedge in all except the higher elevations in the foothills section. On adverse upland sites it makes very slow growth and cannot be used in close competition with native grasses unless it is irrigated. On favorable sites for trees Osage-orange does well as an informal border row for wildlife-habitat-improvement plantings. Propagation is by seed.

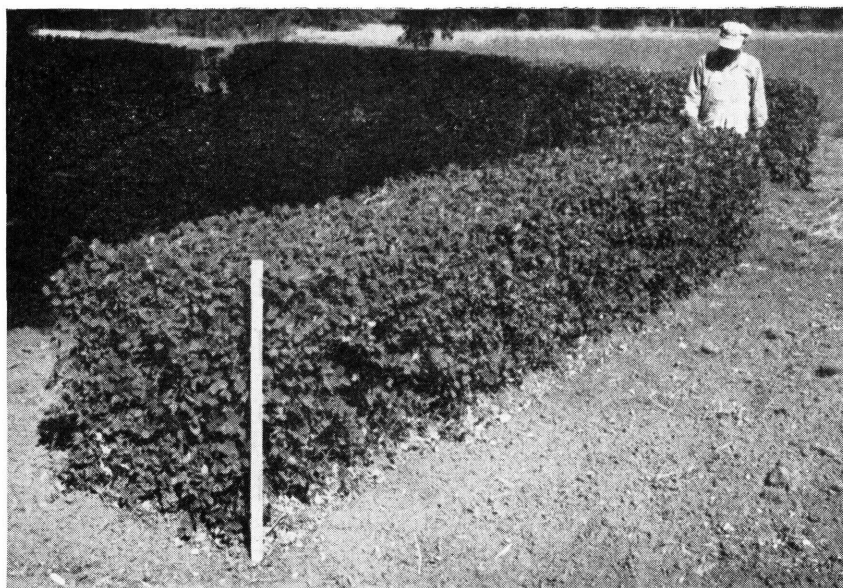


Figure 6.—Winter honeysuckle.

RUSSIAN MULBERRY

(*Morus alba* forma *tatarica* (Pall.) Ser.)

Russian mulberry is an aggressive tree species that can be used in farmstead hedge plantings in all the southern Great Plains area. The large leaves and heavy stems make it too coarse a hedge for small properties, but it is useful for screen and border plantings on farms and ranches. Russian mulberry thrives with little care. The common method of propagation is by seed, although the non-fruited type is propagated by cuttings.

TRIFOLIATE-ORANGE

(*Poncirus trifoliata* (L.) Raf.)

Trifoliata-orange, or hardyorange, makes an excellent barrier hedge in the southern counties of the southern Great Plains area. At Woodward trifoliata-orange often kills back severely and has to be renewed too often to make it worth while to plant. At Big Spring, Tex., it has made a vigorous growth. Propagation is by seed.

VANHOUTTE SPIREA

(*Spiraea vanhouttei* (Briot) Zabel)

Vanhoutte spirea (fig. 7) continues to be the most popular shrub species for informal-hedge use on the southern Great Plains. The graceful form and bloom show to best advantage when the species is properly pruned. Removal of old canes at the ground level after the bloom period will stimulate new wood for the next spring floral display. Vanhoutte spirea can be used as a sheared hedge to 3 feet

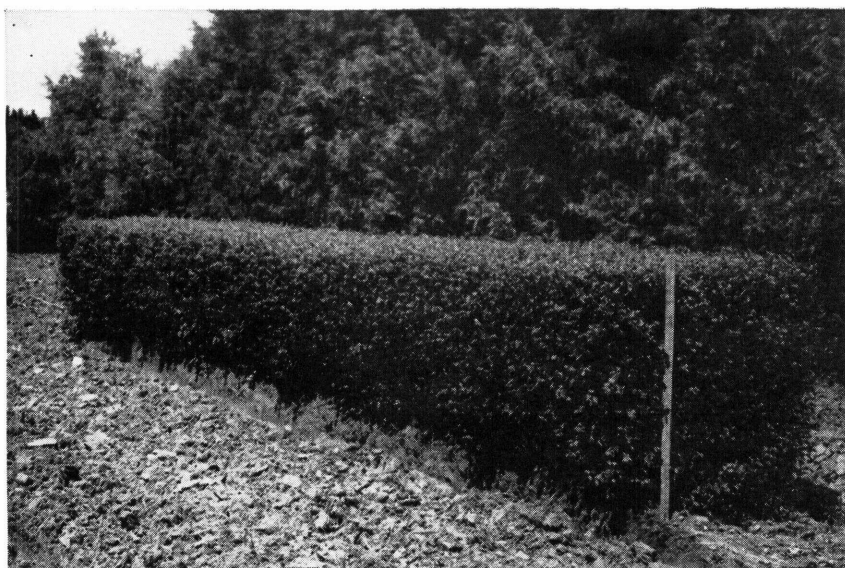


Figure 7.—*Vanhoutte spirea*.

in height for many years. Pruning sacrifices the bloom, but this shrub makes an excellent green hedge. The species develops chlorosis on alkaline sites. Soil treatment with ferrous sulfate will control this condition. Propagation is by cuttings or divisions.

CHENAULT CORALBERRY

(*Symphoricarpos chenaultii* Rehd.)

Recent tests show that Chenault coralberry may be used as a low-growing informal hedge for the major part of the southern Great Plains. Chenault coralberry, for instance, made a more upright growth and has smaller, bright-green leaves and larger fruits than the native Indiancurrant coralberry. Propagation is by layering, division, or cuttings.

INDIANCURRANT CORALBERRY

(*Symphoricarpos orbiculatus* Moench)

Indiancurrant coralberry, or buckbrush, has made a fair natural hedge at Woodward. It is especially useful as a low foreground hedge to hide the bases of sparsely foliated shrubs used in heavy border or screen plantings. Coralberry is easily controlled by cutting the plants back to the ground in late winter. It will develop a fairly compact hedge 2 or 3 feet in height, depending upon soil and moisture. The trailing branches are often heavy with pink to red fruits during the winter. Propagation is by cuttings, layering, and divisions.

CHINESE LILAC

(*Syringa chinensis* Willd.)

Chinese lilac can be kept to a sheared hedge of 2½ to 3 feet in height for many years. Used as an informal hedge, it will make an excellent background planting 7 feet or more in height. In tests in 62 counties it was the most drought-resistant and the most dependable blooming of the lilacs. Propagation is by division.

KASHGAR TAMARIX

(*Tamarix hispida* Willd.)

Kashgar tamarix (fig. 8) is the choice among the many species of *Tamarix* tested on the southern Great Plains. The species can be kept sheared to a low hedge, but it is best when used as a medium-tall informal hedge. To keep it as a low hedge, it should be cut back to the ground every winter. Hedges thus cut back will have attractive feathery bloom in midsummer. Sheared hedges have to be pruned in triangular form with a broad base or they will soon be bare of foliage at the base. Propagation is by cuttings.

ORIENTAL ARBORVITAE

(*Thuja orientalis* L.)

Oriental arborvitae is an almost perfect coniferous species for a sheared hedge. It is the easiest of the conifers to transplant successfully, has had only minor insect damage, and makes rapid growth.



Figure 8.—Kashgar tamarix used as an informal hedge.

The ordinary seedling oriental arborvitae has suffered some winter injury at Woodward, Okla., but a relatively hardy selection is now available for that part of the southern Great Plains south of a line from Woodward, Okla., to Tucumcari, N. Mex. It can be sheared to as low as 3 feet for many years or used as a tall, sheared hedge or as an informal hedge (fig. 9). Oriental arborvitae makes an excellent low windbreak for yard or garden protection. The species has a relatively compact root system; hence, is not competitive. Propagation of select trees is by cuttings. Seedlings are easily grown from spring-planted seed.



Figure 9.—An informal hedge of oriental arborvitae used as a low windbreak.

PARVIFOLIA ELM ⁴

(*Ulmus parvifolia* Jacq.)

Parvifolia, or lacebark, elm makes a very dense hedge that can be sheared 1½ feet or to 10 and 12 feet in height. A 21-year-old hedge at the Woodward station is only 3 feet in height. Many selections have been made of parvifolia elm. Several of these are tender and should be used only in the southern one-third of the southern Great Plains. Others are too slow in growth. A selection made at Woodward can be used under 3,500-foot elevations and as far north as the northern boundary of Oklahoma. Tests made north of this line have not been carried on long enough to warrant a recommendation. Propagation is by seed.

⁴ Parvifolia, or lacebark, elm has been given this common name in the southern Great Plains in order to prevent confusing it with the Chinese, or Siberian, elm. The parvifolia elm has a small, thick, almost leathery leaf, whereas the Chinese elm has a relatively large, thin leaf. The parvifolia elm produces seed in late fall, whereas the Chinese elm seeds in early spring.



Figure 10.—This Chinese elm hedge is the same age as the tall trees in the background.

CHINESE ELM ⁵

(*Ulmus pumila* L.)

Chinese, or Siberian, elm (fig. 10) makes the most rapid-growing hedge of the species tested in the southern Great Plains area. This species is very drought-resistant and tolerates a wide range of soil types. The only condition it cannot survive is too much water. It can be sheared as a low, medium, or tall formal hedge. A hedge at the Woodward station has been kept to 3 feet in height for 21 years. It has a very aggressive root system, so should not be used near orchards or flower or vegetable gardens. Propagation is by seed.

CHASTE-TREE

(*Vitex* spp.)

Lilac chaste-tree (*Vitex agnus-castus* L.), hardy lilac chaste-tree (*Vitex agnus-castus* var. *latifolia* (Mill.) Loud.), and the cutleaf chaste-tree (*Vitex negundo* var. *heterophylla* (Franch.) Rehd.) can all be used as large informal hedges or as hedges sheared to 3 or 4 feet in

⁵ *Ulmus pumila* is called Siberian elm by some botanists. The species has commonly been known as Chinese elm in the Plains area since its introduction.

height. The foliage of all species of chaste-trees is rather coarse, making them more useful as informal hedges than as sheared hedges. In the southern part of the southern Plains, the chaste-tree does not winterkill and will grow to 10 feet or more in height. In the northern part of the area and in the higher elevations along the western boundary, the genus kills back; therefore, it is desirable to trim the plants back to the ground level each winter. In one season plants with well-established roots will reach a height of 6 to 8 feet. Propagation is by cuttings under glass.

VINES AS SUBSTITUTES FOR HEDGES⁶

JAPANESE HONEYSUCKLE AND HALLS JAPANESE HONEYSUCKLE

(*Lonicera japonica* Thunb. and its variety)

The Japanese honeysuckle and Halls Japanese honeysuckle (*Lonicera japonica* var. *halliana* (Dippel) Nichols.) can be planted in single rows to develop neat border hedges along walks, drives, or flower gardens. They will make an evergreen hedge 1½ to 2 feet in height and width. These climbing honeysuckles make an excellent show of bloom when used as hedges. The typical honeysuckle fragrance of the creamy-white to yellow blossoms makes these vines popular in the flower garden. Propagation is by cuttings or by layering.

GRECIAN SILKVINE

(*Periploca graeca* L.)

The very dark green glossy, pointed leaves of Grecian silkvine makes an attractive low hedge or a tall border hedge if trained on fences or trellises. Propagation is by seed, layering, or cuttings.

CHINA FLEECEVINE

(*Polygonum auberti* L. Henry)

The rapid rate of growth of China fleecevine, or silvertine fleece-flower, has made it a popular species for covering fences as a substitute for a hedge. It can also be used as a low, rather broad hedge when allowed to trail on the ground. Planted in a single row at intervals of 5 feet the China fleecevine makes a showy border hedge with a lavish display of greenish-white blooms in late summer and fall. Propagation is by cuttings under glass.

⁶ See Farmers' Bulletin 2015, Ornamental Woody Vines for the Southern Great Plains, for detailed information on vines.

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